

CLAIMS:

1. An apparatus for developing a latent image recorded on a movable imaging surface, including:

a reservoir for storing a supply of developer material including toner particles, said reservoir including a developer material mixing and transport area;

a donor member being arranged to receive toner particles from said reservoir and to deliver toner particles to the image surface at locations spaced apart from each other in the direction of movement of the imaging surface thereby to develop the latent image thereon; and

a climate system, associated with said reservoir, for maintaining said supply of developer material at a predefined temperature, said climate system includes a cooling element for supplying air to said developer material mixing and transport area, and a heating element positioned in said developer material mixing and transport area, said heating element includes a first heat unit associated with heating an inboard area of said developer material mixing and transport area and a second heat unit associated with heating an outboard area of said developer material mixing and transport area.

2. The apparatus of claim 1, wherein said climate system further includes sensors for sensing the temperature of said supply of developer material in an inboard and an outboard position of said developer material mixing and transport area.

3. The apparatus of claim 2, wherein said climate system further includes a controller in communication with said first and second heating units, said cooling element and said sensors, said controller selectively activating and de-activating said heating element, said cooling element base on the temperature sensed by said sensor.

4. The apparatus of claim 2, wherein said heating element is heat sink to an outer portion of said reservoir associated with developer material mixing and transport area.

5. The apparatus of claim 1, further comprising a first mode of operation wherein said cooling element cools said reservoir to a first predefined temperature during a print job.

6. The apparatus of claim 1, further comprising a second mode of operation wherein said heat element heats said reservoir to a second predefined temperature during a standby mode.

7. The apparatus of claim 1, wherein said cooling element supply air to a cooling channel defined in said reservoir.

8. The apparatus of claim 4, wherein said outer portion of said reservoir includes cooling/heating fins for improving heat transfer.

9 An xerographic printer including an environmental enclosure having xerographic stations enclosed therein selected from the group of: an imaging member, imaging station for recording an image on the imaging member, a development station for developing station for developing the image on the imaging member, and a transfer station for transferring the developed image to a substrate, comprising:

an environmental climate unit connected to the environmental enclosure for maintaining xerographic stations therein at a predefined temperature; and wherein

said development station includes:

a reservoir for storing a supply of developer material including toner particles, said reservoir including a developer material mixing and transport area;

a donor member being arranged to receive toner particles from said reservoir and to deliver toner particles to the image surface at locations spaced apart from each other in the direction of movement of the imaging surface thereby to develop the latent image thereon; and

a climate system, associated with said reservoir, for maintaining said supply of developer material at a second predefined temperature, said climate system includes a cooling element for supplying air to said developer material mixing and transport area, and a heating element positioned in said developer material mixing and transport area, said heating element includes a first heat unit associated with heating an inboard area of said developer material mixing and transport area and a second heat unit associated with heating an outboard area of said developer material mixing and transport area.

10. The xerographic printer of claim 9, wherein said climate system further includes sensors for sensing the temperature of said supply of developer material in an inboard and an outboard position of said developer material mixing and transport area.

11. The xerographic printer of claim 10, wherein said climate system further includes a controller in communication with said first and second heating units, said cooling element and said sensors, said controller selectively activating and deactivating said heating element, said cooling element base on the temperature sensed by said sensor.

12. The xerographic printer of claim 10, wherein said heating element is heat sink to an outer portion of said reservoir associated with developer material mixing and transport area.

13. The xerographic printer of claim 9, further comprising a first mode of operation wherein said cooling element cools said reservoir to a first predefined temperature during a print job.

14. The xerographic printer of claim 9, further comprising a second mode of operation wherein said heat element heats said reservoir to a second predefined temperature during a standby mode.

15. The xerographic printer of claim 9, wherein said cooling element supply air to a cooling channel defined in said reservoir.

16. The xerographic printer of claim 14, wherein said outer portion of said reservoir includes cooling/heating fins for improving heat transfer.